

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions of claims in the application.

1. (Previously presented): A broad band cholesteric liquid crystal film comprising: a cholesteric liquid crystal film obtained by polymerizing a liquid crystal mixture, that is free of an ultraviolet absorbent, containing a polymerizable mesogen compound (a), a polymerizable chiral agent (b) and a photopolymerization initiator (c) between two substrates with ultraviolet light, and has a reflection bandwidth of 200 nm or more.

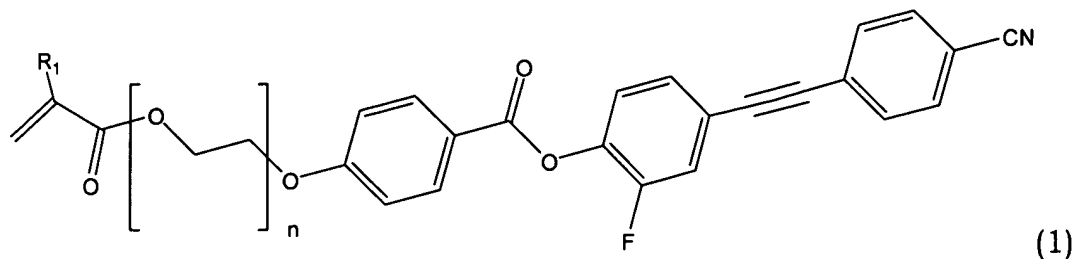
2. (Original): The broad band cholesteric liquid crystal film according to claim 1, wherein a pitch length in the cholesteric liquid crystal film changes so as to narrow continuously from a side irradiated with ultraviolet light.

3. (Currently amended): The broad band cholesteric liquid crystal film according to claim 1 [[or 2]], wherein the polymerizable mesogen compound (a) has one polymerizable functional group and the polymerizable chiral agent (b) has two or more polymerizable functional groups.

4. (Canceled)

5. (Currently amended): The broad band cholesteric liquid crystal film according to ~~any one of claims 1 to 3~~ claim 1, wherein the molar absorption coefficient of the polymerizable mesogen compound (a) is 50 to 500 $\text{dm}^3 \cdot \text{mol}^{-1} \cdot \text{cm}^{-1}$ at 365 nm.

6. (Currently amended): The broad band cholesteric liquid crystal film according to ~~any one of claims 1 to 3 or 5~~ claim 1, wherein the polymerizable mesogen compound (a) is a compound represented by the following general formula (1):



wherein R_1 represents a hydrogen atom or a methyl group, and n is an integer of 1 to 5.

7. (Currently amended): A manufacturing method for the broad band cholesteric liquid crystal film according to ~~any one of claims 1 to 3, 5 or 6~~ claim 1 comprising steps of: polymerizing a liquid crystal mixture containing a polymerizable mesogen compound (a), a polymerizable chiral agent (b) and a photopolymerization initiator (c) between two substrates with ultraviolet light.

8. (Currently amended): A circularly polarizing plate comprising the broad band cholesteric liquid crystal film according to ~~any one of claims 1 to 3, 5 or 6~~ claim 1.

9. (Original): A linearly polarizer comprising the circularly polarizing plate according to claim 8 and a $\lambda/4$ plate laminating on the circularly polarizing plate.

10. (Original): The linearly polarizer according to claim 9, the circularly polarizing plate, which is the cholesteric liquid crystal film, laminates on the $\lambda/4$ plate so that a pitch length in the film is narrowed toward the $\lambda/4$ plate continuously.

11. (Currently amended): A linearly polarizer comprising an absorption polarizer adhering to the linearly polarizer according to claim 9 [[or 10]] so that a transmission axis direction of the absorption polarizer and a transmission axis of the linearly polarizer are arranged in parallel with each other.

12. (Currently amended): The linearly polarizer according to ~~any one of claims 9 to 11~~ claim 9, wherein the $\lambda/4$ plate satisfies that a Nz coefficient defined by formula $(n_x - n_z)/(n_x - n_y)$ is -0.5 to -2.5 when in-plane major refractive indexes are n_x and n_y respectively and the major refractive index in the direction of thickness is n_z .

13. (Currently amended): A luminaire comprising the circularly polarizing plate according to claim 8 ~~or the linearly polarizer according to any one of claims of 9 to 12~~ on a front surface side of a surface light source having a reflective layer on the back surface side thereof.

14. (Original): A liquid crystal display comprising a liquid crystal cell in a light emitting side of the luminaire according to claim 13.

15. (New): A luminaire comprising the linearly polarizer according to claim 9 on a front surface side of a surface light source having a reflective layer on the back surface side thereof.

16. (New): A liquid crystal display comprising a liquid crystal cell in a light emitting side of the luminaire according to claim 15.